

Electronic supplementary information

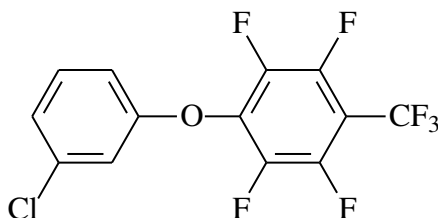
POROUS ORGANIC POLYMERS BASED ON A POLYMER OF INTRINSIC MICROPOROSITY

I. I. Ponomarev, Yu. A. Volkova, E. S. Vtyurina, and K. M. Skupov*

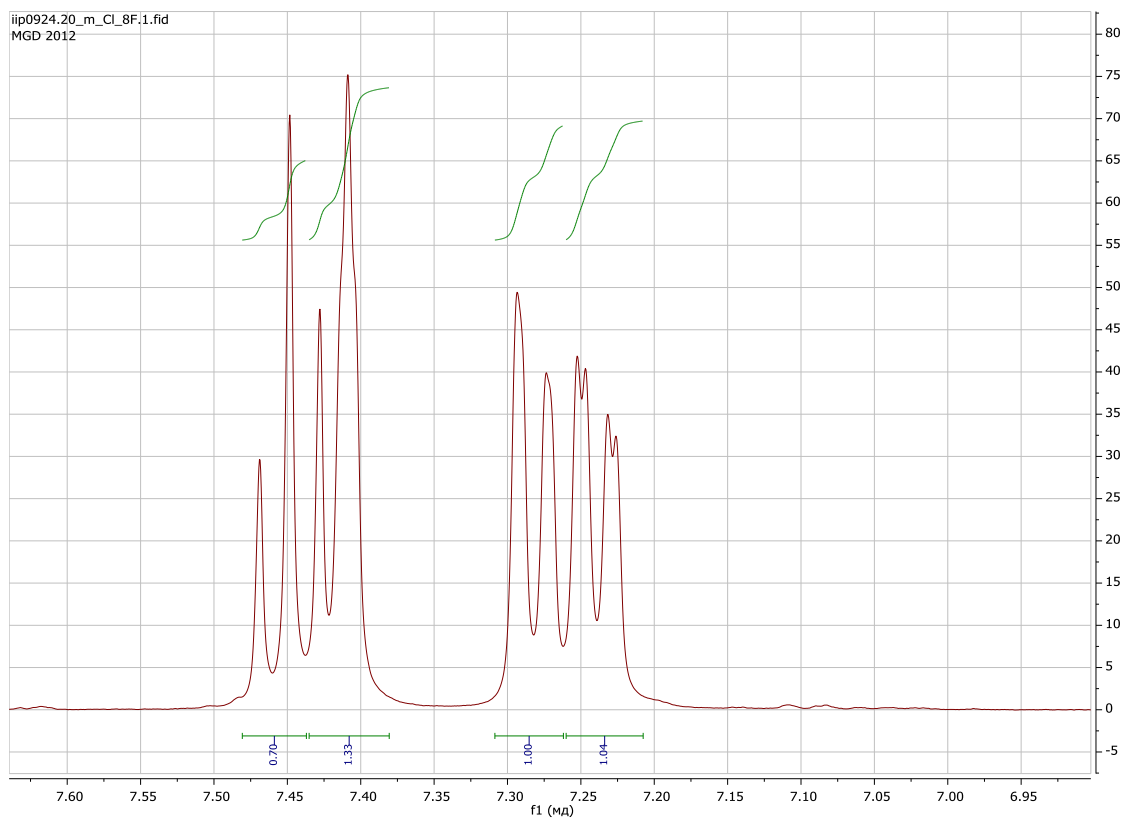
*Nesmeyanov Institute of Organoelement Compounds, Russian Academy of Sciences,
ul. Vavilova 28, str. 1, Moscow, 119334 Russia*

NMR spectra

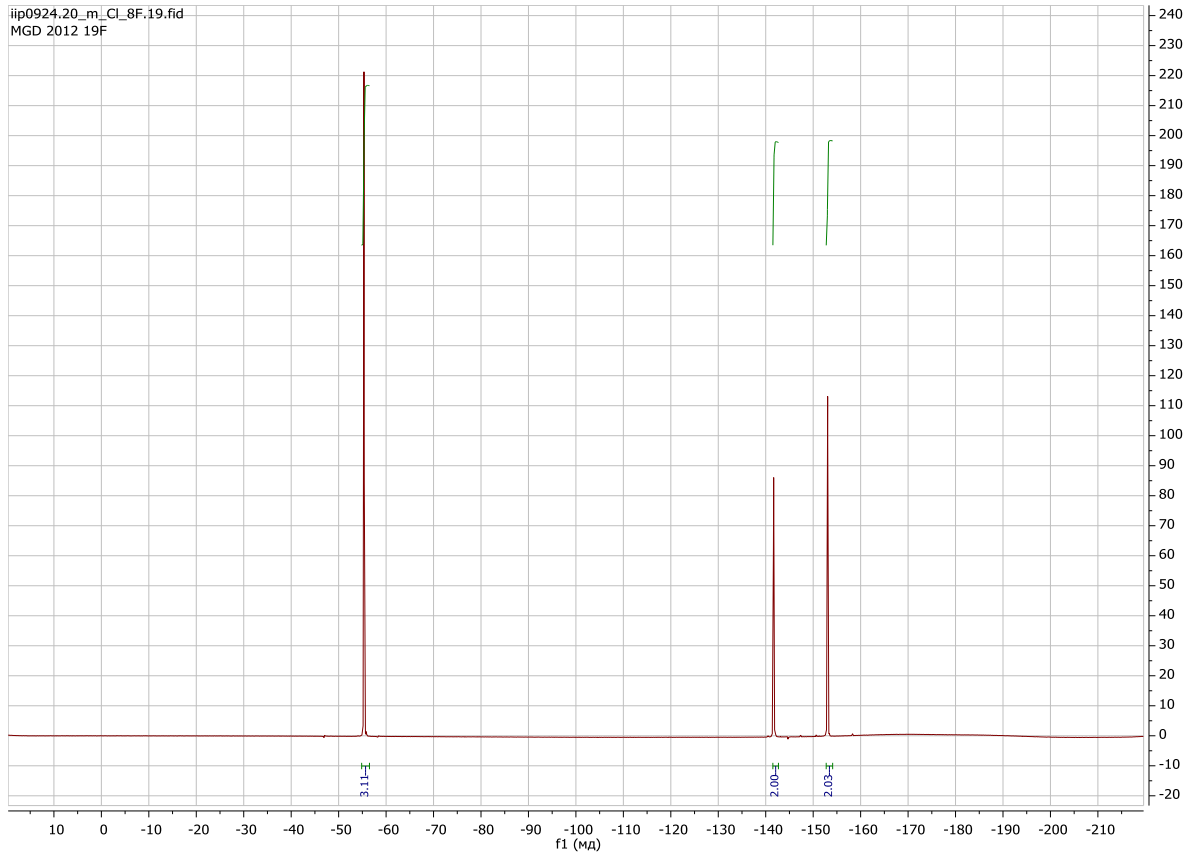
1-(3-Chlorophenoxy)-2,3,5,6-tetrafluoro-4-(trifluoromethyl)benzene

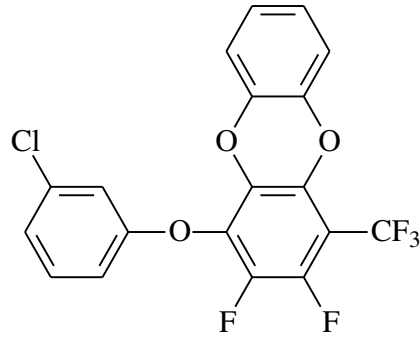


¹H NMR spectrum in DMSO-d₆

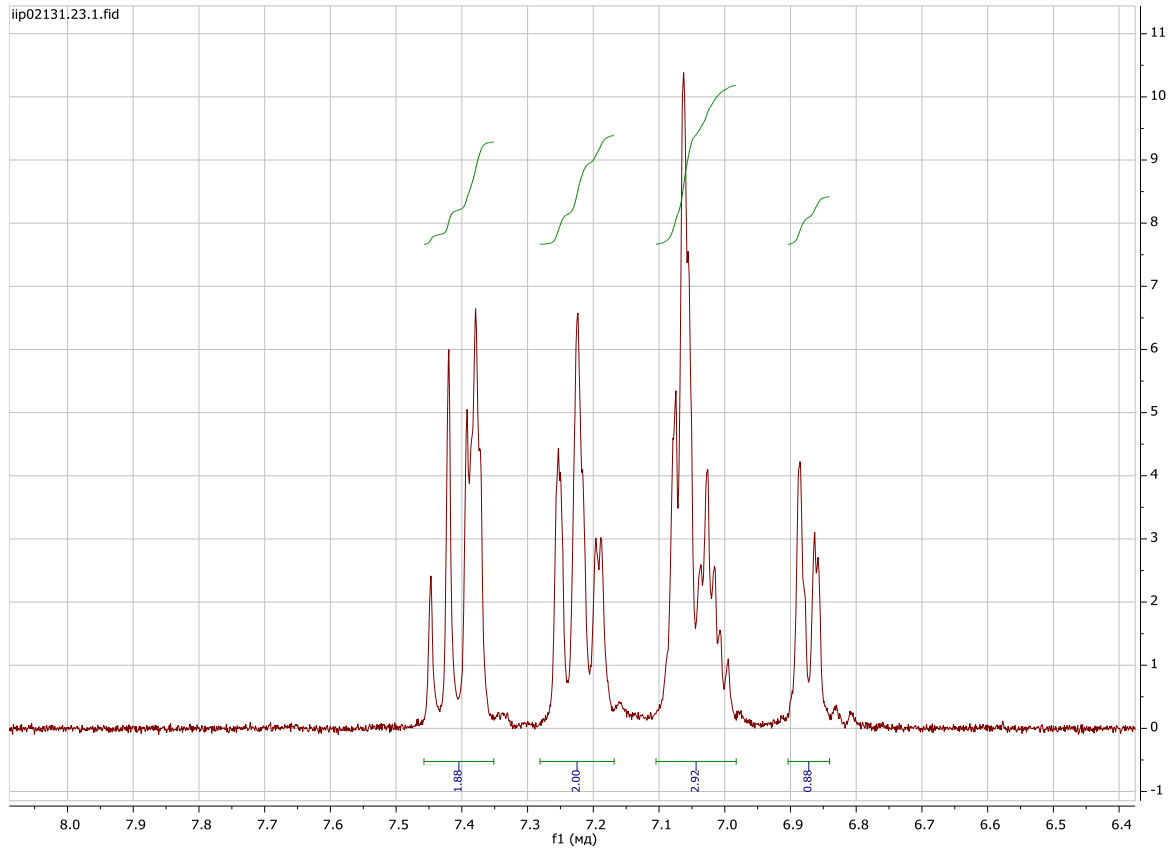


¹⁹F NMR spectrum in DMSO-d₆

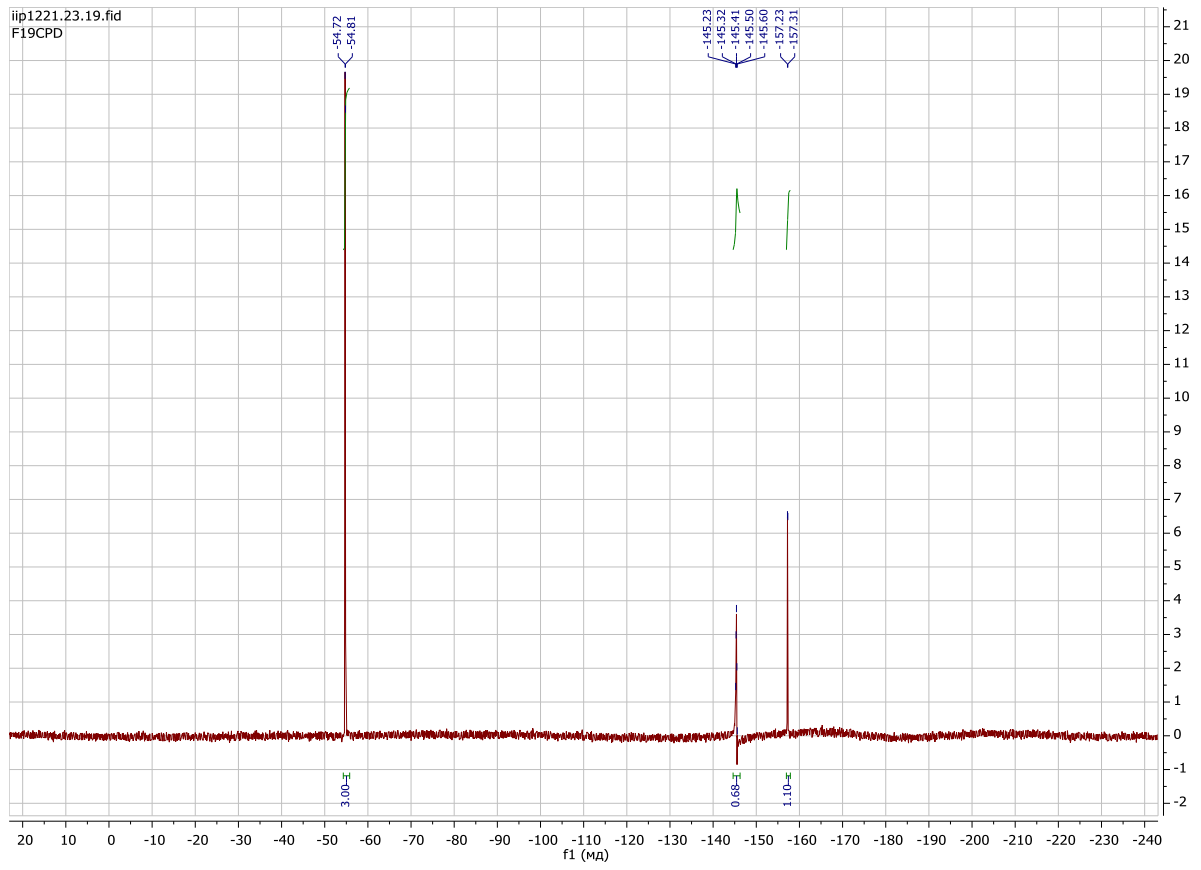


1-(3-Chlorophenoxy)-2,3-difluoro-4-(trifluoromethyl)-dibenzo[*b,e*][1,4]dioxin

¹H NMR spectrum in DMSO-d₆

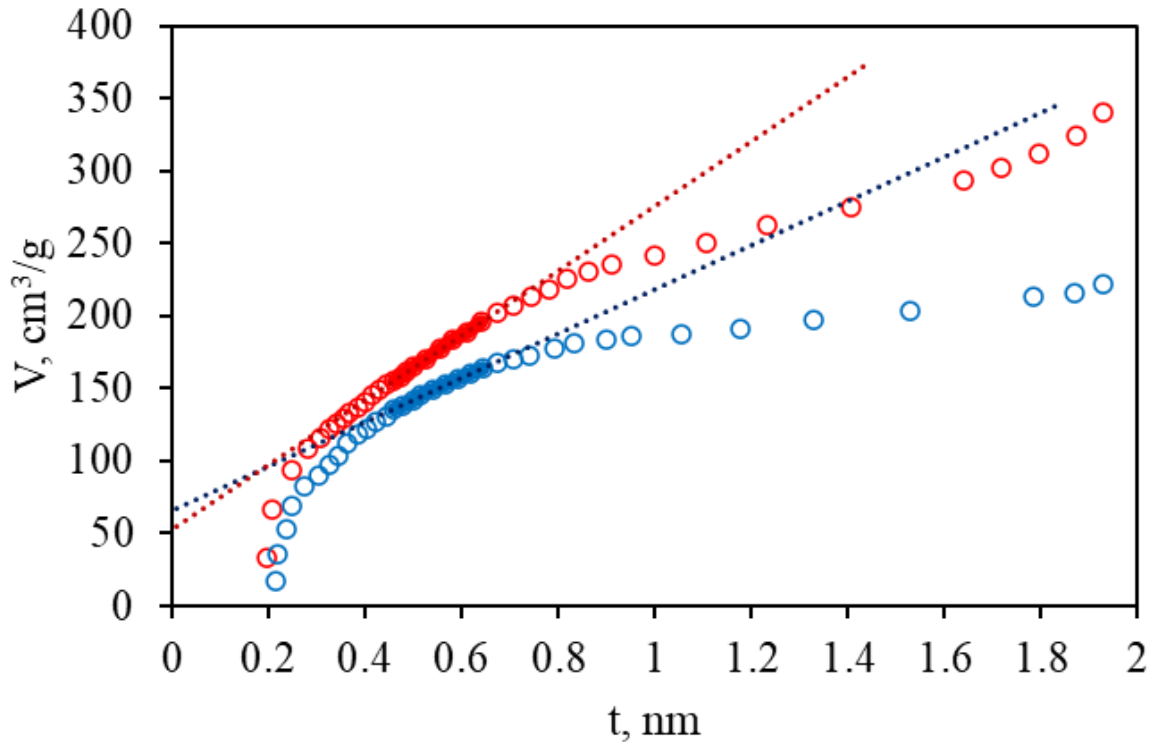


¹⁹F NMR spectrum in DMSO-d₆



Full range t-plots

The t-plots at the p/p_0 range of 0–1 for layer thickness (t) up to ~ 2 nm in accordance with the Harkins–Jura (HJ) equation are shown for samples **1** (blue) and **2** (red). The points in the standard t-plot range for layer thickness (t) range of 0.45–0.65 nm (linearized part of the t-plot) is highlighted in both curves. The trendlines are built for the linearized standard t-plot range.



Harkins–Jura (HJ) equation

$$t(\text{nm}) = \sqrt{\frac{13.99}{0.034 - \log\left(\frac{p}{p_0}\right)}}$$

where t is the layer thickness; p and p_0 are the equilibrium and saturation pressures of an adsorbate, respectively.

References

- S1. W. D. Harkins, G. Jura, *J. Am. Chem. Soc.*, **1944**, *66*, 1362–1366. DOI: 10.1021/ja01236a047
- S2. J. Choma, M. Jaroniec, M. Kloske, *Adsorpt. Sci. Technol.*, **2002**, *20*, 307–315. DOI: 10.1260/026361702760254487